



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,914	07/11/2003	Toshiji Taiji	8017-1094	2404

466 7590 07/24/2006

YOUNG & THOMPSON
745 SOUTH 23RD STREET
2ND FLOOR
ARLINGTON, VA 22202

EXAMINER

UMEZ ERONINI, LYNETTE T

ART UNIT	PAPER NUMBER
----------	--------------

1765

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/616,914	Applicant(s) TAIJI ET AL.	
	Examiner Lynette T. Umez-Eronini	Art Unit 1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is in response to Applicants' Remarks in Amendment (filed 5/11/2006), which was persuasive in showing Kaisaki (US 6,109,317 B1) failed to teach the specific combination of a slurry comprising silica, an oxidizing agent, a benzotriazole-based compound, a diketone, which is selected from the group of 1,2-, 1,3- and 1,4-diketones, and water. Hence, a new Office Action is presented.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1 and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaisaki et al. (US 6,194,317 B1).

Kaisaki discloses, "The working liquid aids processing in combination with the abrasive article through chemical mechanical polishing process" (column 12, lines 49-51) and ". . . the working liquid is an aqueous solution which includes . . . an oxidizing material or agent" (column 12, lines 54-58). Kaisaki discloses the working liquid comprises: additional chelators that include 1,3-diketones (column 14, lines 13-14), corrosion inhibitor such as benzotriazole (column 14, line 63 - column 15, line 2 and column 15, lines 39-47), and inorganic particulates that include silica (column 22-24). The aforementioned reads on,

A slurry for chemical mechanical polishing, which comprises a silica polishing material, an oxidizing agent, a benzotriazole-based compound, a diketone and water, and wherein said diketone is at least one the of a compound selected from the group consisting of 1,2-diketones, 1,3-diketones and 1,4-diketones, **in claim 1**.

It is noted that Kaisaki differs in failing to disclose Applicants' specific combination of silica, oxidizing agent, benzotriazole, diketone and water.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select any combination of components of the polishing slurry as taught by Kaisaki, including Applicants' claimed polishing components, for the purpose removing a second material from the surface of a first material under the action of an abrasive article (column 8, lines 14-18).

Kaisaki discloses, "buffers may be added to the working liquid to control the pH . . . In addition, the most preferred buffers can be adjusted to span the pH range from acid to near-neutral . . . (column 14, lines 40-50), which encompasses and reads on, a slurry for chemical mechanical polishing wherein a value of a pH is in a range of 1 to 7, **in claim 4.**

Kaisaki differs in failing to disclose a content weight ratio of said diketone to said benzotriazole-based compound is not less than 0.05 but not greater than 50 and not less than 0.05 but not greater than 10, respectively **in claims 1 and 6.**

However, Kaisaki illustrates the specific combination of a benzotriazole and diketone is known. As a result, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select any weight content of benzotriazole and diketone, including Applicants' specifically claimed weight ratio of diketone/benzotriazole-based compound that would effectively accomplish the disclosed composition in the absence of evidence of unexpected results.

Response to Arguments

4. Applicant's arguments, see Remarks, filed 5/11/2006, with respect to the rejection(s) of claim(s) 1, 5, and 5 under 35 U.S. C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kaisaki (US 6,194,317 B1) under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynette T. Umez-Eronini whose telephone number is 571-272-1470. The examiner is normally unavailable on the First Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571-272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit 1765

ltue

July 10, 2006

NADINE NORTON
SUPERVISORY PATENT EXAMINER
ART UNIT 1765

